

UPY 673  
LUBE OIL SAMPLE

4/26/2020  
3:47:54PM

Health:Green, Last Calc:04/26/2020 04:03, Power:100%, Trail Only:No

MAINT ALERTS

EXAM M-ALERT CLAIMS DEPT MECH INSP REQUEST-6423306(Yellow)

ECZ

Defect Information

Yellow, 04/23/2020 21:51, PWR:100%, TO:Y, Src:UPM, Cnst:, Tmp:, Rep:N  
Function:MAINTENANCE ALERT  
Behavior:CLAIMS DEPT MECH INSP REQUEST

Failure Mode

COMPLETE LMI 9429 MECHANICAL INSPECTION REPO

Defect Comments

Initial:The Risk Management Group will need an LMI 9429 completed on this unit  
for an incident that occurred @ MP 14.82 Proviso Yard // RMCC  
2020-04-23-059NWE....ggl

OTHER WORK

EXAMINE SPECIAL INSTRUCTIONS

ECZ

10/04/2017 TJZ "This locomotive is not alerter equipped. If used as a  
controlling locomotive, locomotive cannot operate at speeds in excess of 25mph."

RECEIVING:RECEIVING

INSPECT VIDEO IMAGE RECORDER

- Examine the LED indicators on the DVR. Note LED status.
1. Inspect the image recorder system for LED indicator panel status  
and vandalism/damage.  
If any component, (Cameras, LDVR or microphone) has been vandalized  
contact RMCC immediately at 1-888-877-7267.  
Provide unit number and location.
2. Examine the DVR (Digital Video Recorder), camera(s), and  
associated cables for damage. Note any damage [\_\_\_\_\_]
3. Examine the LED indicators on the DVR. Note LED status.  
1. REC and LAN (Green), LEDs should be lit, (when powered).  
2. HD, C1, (C2, C3 if equipped), M1 LEDs (RED), should not  
be lit [\_\_\_\_\_]
4. Ensure the front, (TIC) camera view is oriented to front and within  
the wiper path.
5. Ensure the rear, (RIC if equipped), camera view is oriented facing  
out from the rear of the engine. Camera should be clean and clear  
of obstructions
6. Ensure the cab, (CIC if equipped), camera view is oriented toward  
the cab interior. Camera should be clean and clear of obstructions

SERVICE TRACK:SV PIT

SERVICE TRACK:SV PIT

RECORD WHEEL MEASUREMENTS

WCH

- Standard Work Task
1. Setup
  - 1) If using W600-1A Wheel "Finger" Gauge then refer to LMI 5220 for further instruction. Close steps 1, 2, and 3 on the task.
  - 2.1) Inspect EWG. Determine there are no defects and perform the job safely.
  - 2.2) Press Forward and Backward keys at the same time.
  - 3) Check battery level . Check battery charge on LCD display
  - 4.1) Set-up EWG. Select "System Setup"
  - 4.2) Select "Time and Date"
  - 4.3) Press back arrow. Return to "System Setup"
  - 4.4) Select "System Setup"
  - 4.5) Select "Chng Operator"
  - 4.6) Press back arrow. Return to "System Setup"
  - 4.7) Select "System Setup"
  - 4.8) Select "Chng Location"
  - 4.9) Press back arrow twice. Return to main menu
2. Locomotive information set-up
  - 1) If using W600-1A Wheel "Finger" Gauge then refer to LMI 5220 for further instruction. Close this step on the task.
  - 2.1) Enter Locomotive information. Select "Record Manager"
  - 2.2) Select "Add Record"
  - 2.3) Enter unit initials (ie. UP or UPY) and select enter
  - 2.4) Enter unit number (####) and select enter
  - 2.5) Enter number of axles and select enter
  - 2.6) Press back arrow twice Return to main menu
  - 3.1) Prepare to collect measurements on EWG. Select "Collect Data" Prepare gauge to record wheel measurements
  - 3.2) Select "Record Selection"
  - 3.3) Select Locomotive ID number
  - 3.4) Select "Wheels"
  - 3.5) Select first wheel to measure (i.e. L1)
3. Record wheel measurements
  - 1) If using W600-1A Wheel "Finger" Gauge then refer to LMI 5220 for further instruction. Close this step on the task.
  - 2) Inspect wheel. Check for Defects, refer to LMI 5202 Record defects as found
  - 3.1) Take wheel measurements. Place EWG on inner rim of wheel
  - 3.2) Press button on EWG. EWG will measure rim thickness, flange thickness and flange height
  - 3.3) Wait for audible indicator, long beep
  - 3.4) Press button on EWG
  - 3.5) Place EWG on outer rim of wheel
  - 3.6) Press button on
  - 3.7) Wait for audible indicator, long beep
  - 4) Repeat steps 3.1-3.7 for the remaining wheels
  - 5) Up load wheel measurements on computer. Place wheel gauge next to receiver attached to computer
4. Provide Wheel Measurements
  - 1) If using W600-1A Wheel "Finger" Gauge then refer to LMI 5220 for further instruction. Close this step on the task.
  - 2) Open Mini EWG Computer Program. At the MCS work station, click on Start and select "Programs / Mini EWG Download / Mini EWG Download"
  - 3) Upload Wheel Measurements from EWG to PC. Place EWG in front of IR Port

WCH

WCH

WCH

WCH

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SERVICE TRACK:SV PIT

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4.
  - 4) From Main Menu on EWD LCD, select "Connect to PC" using navigational keys. When connection between computer and EWG is made, LCD display on EWG will display "Connected to PC"
  - 5) Select "Download" in Mini EWG computer program
  - 6.1) Verify download is complete. Download is complete when wheel measurement record is displayed on computer screen
  - 6.2) Close Mini EWG Program
  - 7) Review the wheel report for the wheel measurements uploaded. wheel report is updated if the date, time, and operator initials are correct

TAKE COOLING WATER SAMPLE

Standard Work Task

1. Work Setup Tasks \_\_\_\_\_
  - 0.1.1) Calibrate Myron L Dissolved Solid Meter (UP PN 200-2012)  
Should be performed at the start of the first shift of the first day of the month
  - 0.1.2) Push red button - reading should match internal standard printed on the bottom of the meter
  - 0.1.3) Rinse cell cup three times with Myron L Meter Calibration Fluid (UP PN 200-2014)
  - 0.1.4) Fill call cup with Myron L Meter Calibration fluid to at least 1/4" above upper electrode
  - 0.1.5) Push black button - reading should match that printed on the Calibration Fluid bottle.
2. Collect Cooling Water Sample \_\_\_\_\_
  - 1.1) Open drain cock  
Use approved PPE gloves to collect water sample.
  - 1.2) Collect cooling water sample in fluid sample bottle  
Use caution when filling the bottle to avoid splashing with liquid
  - 1.3) Close drain cock
3. Test Cooling Water Treatment Level \_\_\_\_\_
  - 2.1) Test cooling water sample temperature  
Use temperature gun part# 410-9310
  - 2.2.1) Pour cooling water sample from bottle into cell cup of Myron L Meter  
Rinse cell cup three times
  - 2.2.2) Fill cell cup with sample to at least 1/4" above upper electrode
  - 2.3.1) Get cooling water treatment level reading  
Push black button on Myron L Meter
  - 2.3.2) Enter meter reading [\_\_\_\_\_]

SERVICE TRACK:SV PIT

COMPLETE LMI 9429 MECHANICAL INSPECTION REPORT 01

ECZ

Fill in all answers for questions regarding this task.

- |     |  |     |
|-----|--|-----|
| 1.  | Reason for Report[PERSONAL INJURY_____]  | WCH |
| 2.  | Event Recorder Download Taken[YES]   | JBH |
| 3.  | TIR Equipped [YES]   | JBH |
|     | TIR Operational (Verify the REC LED is green) [YES]  |     |
| 4.  | Ditchlights Operating[YES]   | EKB |
|     | Headlight Operating[YES]   |     |
|     | Rear Headlight Operating[YES]  |     |
| 5.  | Horn Operating [YES]   | WCH |
|     | Where Mounted[CAB_____]  |     |
|     | Number of Trumpets Forward [2 FORWARD_____]  |     |
|     | Number of Trumpets Rear [1 REAR_____]  |     |
|     | As information:  |     |
|     | 3 trumpets forward, 2 reverse is model K-5LA-R24   |     |
|     | 1 trumpet forward, 4 reverse is model K-5LLA-R1L   |     |
|     | 2 trumpets forward, 1 reverse is model K3HA-R2   |     |
| 6.  | Air Brake Departure Test Completed [YES__]   | WCH |
| 7.  | Cab Floor Condition[GOOD__]  | WCH |
|     | Cab Seats Condition[GOOD__]  |     |
|     | Mirrors Condition[GOOD__]  |     |
|     | Windows Condition[GOOD__]  |     |
|     | Windshield Wipers Operating[YES]   |     |
| 8.  | Crossing Bell Operating [YES]  | WCH |
|     | Crossing Bell [PNEUMATIC__]  |     |
|     | Where Mounted[ENGINEER SIDE_____]  |     |
| 9.  | Handbrake Operational[YES]   | WCH |
| 10. | Sand Condition[DRY]  | WCH |
|     | Sand Level Front[EMPTY_____]   |     |
|     | Sand Level Rear[EMPTY_____]  |     |
|     | Sanders Operational[YES]   |     |
|     | Normal Sand Flow to Rail[NO__]   |     |
| 11. | Brake Shoes Condition[GOOD__]  | WCH |
| 12. | Brake cylinder travel by individual cylinder   | WCH |
|     | L1 [> 3.5"_____]   |     |
|     | L2 [3.5"_____]   |     |
|     | L3 [2"_____]   |     |
|     | L4 [3"_____]   |     |
|     | R1 [3"_____]   |     |
|     | R2 [>3.5"_____]  |     |
|     | R3 [>3.5"_____]  |     |
|     | R4 [3.5"_____]   |     |
| 13. | Note any repairs made:   | WCH |
|     | [_____]  |     |
| 14. | Manager /Supervisor signoff that all steps have been completed for Mechanical Inspection Report. | ECZ |

SERVICE TRACK:SV PIT

FILL SAND BOX 01

- Standard Work Task
1. Inspect Sandbox Front
    - 0.1.1) Inspect sand level locomotive front  
Ascend locomotive at front and enter cab
    - 0.1.2) Tap sandbox with plastic reverser tool from bottom to top
    - 0.1.3) Listen for change in sound both sides
    - 0.1.4) Ensure sand level is above 3/4 or 10 inches below top of tank.
  2. Fill Sandbox Front
    - 1.1) Secure sanding wand  
Secure along handrail prior to ascending and descending
    - 1.2) Open sandbox fill tube  
Use sanding hook to open sandbox lid
    - 1.3) Sand front of locomotive  
Apply sanding nozzle to front sandbox of locomotive
    - 1.4) Activate sanding system  
Apply power to sander until sand tank is full or automatically shuts off.
  3. Inspect Sandbox Rear
    - 2.1) Sand rear of locomotive  
Ascend locomotive at rear
    - 2.2) Open sand tank and inspection level  
Must be 3/4's full or 10 inches from the top tank
  4. Fill Sandbox Rear
    - 3.1) Secure sanding wand  
Secure along handrail prior to ascending
    - 3.2) Apply sand wand to rear sand tank tube  
Ensure nozzle is seated squarely into fill tube.
    - 3.3) Activate Sanding System  
Apply power to sander until sand tank is full or automatically shuts off.
    - 3.4) Remove sand wand from inlet tube  
Secure along handrail prior to descending

INSPECT COOLING WATER COLOR

Inspect Cooling Water Color

Having the proper water treatment levels helps prevent rust and contamination in the water system that can lead to locomotive component failures (i.e. water pump seals, clogged intercoolers, etc.)

Check the color of the water in the sight glass.  
Is it clear, pink, or brown... pick the closest color.

1. Cooling Water Color [CLEAR\_\_\_\_\_]

WCH

WCH

SERVICE TRACK:SV PIT

ADJUST COOLING WATER LEVEL 01

Standard Work Task

1. Verify Coolant Level
  - 1) "CAUTION" Never remove Expansion Tank Cap!
  - 2.1) Verify system water level. Allow to idle for a minimum of 15 minutes before checking water level.
  - 2.2) Use sight glass to verify water level
  - 3) Vent the system. Manually open vent valve and allow system vent for one minute
  - 4) Inspect hose and Hansen fittings. Verify Hansen fitting is not damaged. If unit has a "snake" water fill connector and no Hansen fitting, unscrew and remove the "snake" connector, replacing it with a UP Item Number 190-7312 1/2" NPT Hansen fitting.
  - 5) Attach fill hose
2. Adjust/Fill Cooling Level
  - 1) Fill cooling system. Fill cooling system to "Full" at idle mark on sight glass.
  - 2) Remove fill hose

REVIEW WHEEL REPORT

Review wheel report for compliance to LMI 5202 and LMI 5211. If wheels do not meet criteria, by showing blue or red in wheel report, add True Wheel Set task or Change Traction Motor task and arrange to change or true wheels.

1. Manager must sign-off this task if you are not going to True Wheels or Change Motor, if wheels do not meet company specifications.

TEST AIR DRYER 01

Standard Work Task

994 AIR DRYER TROUBLESHOOTING

This task utilizes the air dryer power analyzer tool (724-7785) to determine the status of the power supply and verify cycling

1. Preparation
  - 1) Secure locomotive. Ensure handbrake is applied.
2. Test air dryer
  - 1) Disconnect power cable from air dryer
  - 2) Connect analyzer cable to air dryer
  - 3) Connect power cable from locomotive to analyzer
  - 4.1) With air dryer analyzer connected and test switch in "OFF" position. The "Supply Voltage Normal" light should be on. The "Intermittent Voltage On" light should be on ONLY when the air compressor is pumping.
  - 4.2) If any other light is on, troubleshoot air dryer power supply
  - 5.1) Troubleshoot air dryer power supply (if necessary)
  - 6) Switch analyzer to "ON" position to begin air dryer cycling
  - 7.1) Verify air dryer cycling

Listening to the dryer as it exhausts air is the best way to determine if it is cycling properly. 975 and 994 air dryer cycles are slightly different.

  - 7.3) 994 Air Dryer: Loud burst and 48 seconds steady blow tower #1, 17 seconds nothing, loud burst and 48 seconds steady blow tower #2, 17 seconds nothing, repeat.
  - 8) Verify air dryer cycling after repairs

Disconnect analyzer and reconnect power cable to air dryer after verification

SERVICE TRACK:SV PIT

VERIFY OPERATION RCL SAFETY FEATURES

RN

When an RCL Locomotive is released from shop a functional test of the RCL system should be performed. These tests do not require movement of the locomotive. These tests are intended to test the operation of the locomotive only. Depending on the type of repairs completed, additional test involving locomotive movement may be required. The "911" tones are verified audibly for now. Soon, A Touch-Tone Decoder is used to verify "911" mandown message.

1. Functional Air Brake Test for RCL Equipped Locomotives

RN

Set Up Locomotive

Refer to LMI 7912 for CCB26 Linking Instructions (Gensets)

Step Action

- 1 Establish Blue Signal protection and set handbrake.
- 2 Perform manual air brake test as outlined in LMI 0012.
- 3 Verify that the locomotive radio is installed and cable from RCL system is applied to the radio's auxiliary connector. Set channel on locomotive radio and monitor radio to unused channel for testing,
- 4 Set up locomotive as follows:  
Apply Locomotive in RCL warning tag to control stand.  
Set Isolation Switch to Isolate.  
Set air brake equipment to Lead, Cut in.  
Turn On RCL circuit breaker.  
Changeover Switch to RCL.  
If required, set changeover valve to RCL position.
- 5 Link RCT.
- 6 Verify that the test message is broadcast over the locomotive radio.
- 7 Verify both amber strobe lights on locomotive cab are flashing.

2. Test RCL Independent Brakes

RN

Ensure:

RCT Independent Override Selector is in Release position.

RCT Automatic Brake Selector is in Release position.

NOTE: BELL WILL RING WHEN PERFORMING THIS TEST.

VERIFY THAT ISOLATION SWITCH IS IN ISOLATE.

Step Action

- 1 Place RCT reverser in either Forward or Reverse.
- 2 Press vigilance button on RCT.
- 3 When the speed selector is moved to Couple, the bell will ring.
- 4 Verify that Independent brakes release (0 psi).
- 5 Move Speed Selector to Stop.
- 6 Verify that independent brakes apply. Verify brake cylinder pressure is full application: 45 psi for clasp arrangement typical; 72 psi for single shoe arrangement typical.
- 7 Place RCT reverser in Neutral.  
NOTE: CANAC Beltpack allows 20 seconds for this test. After 20 seconds a full independent brake application will occur.

3. Test RCL Automatic Brakes

RN

Ensure:

RCT Independent Brake Override Selector is in Release position.

RCT Automatic Brake Selector is in Release position.

RCT is in Neutral. Speed Selector is in Stop.

Step Action

- 1 Advance Automatic Brake Selector through each position

SERVICE TRACK:SV PIT

3. pausing at each to allow pressures to stabilize.  
Setting Reduction Brake Pipe Pressure +/- 3 PSI  
Release  
0  
90  
Minimum  
7 psi  
83 psi  
Light  
10 psi  
80 psi  
Medium  
15 psi  
75 psi  
Full  
20 psi  
70 psi
- 2 Return Automatic Brake Selector to Release -  
BP should return 90 psi.  
NOTE: Auto bail feature should bail applications only in the minimum and light settings from automatic brake reductions. Medium and full setting should result in full independent brake cylinder pressure (45 psi or 72 psi depending on J valve).
4. Test RCL Emergency Brake  
Ensure:  
RCT Independent Brake Override Selector is in Release position.  
RCT Automatic Brake Selector is in Release position.  
RCT Reverser is in Neutral.  
RCT Speed Selector is in Stop.  
Step Action  
1 Place Independent Brake Override Selector into Emergency position.  
Verify Brake pipe pressure rapidly falls to 0 psi.  
Verify Brake Cylinder pressure rises to 72-80 psi (43-48 psi on locos with clasp arrangement composition shoes - J16B relay valve).  
2 To recover from emergency:  
Wait 30 to 50 seconds.  
Press Vigilance button on RCT.  
Move Independent Brake Override Selector to Release position  
PCS will reset and brake pipe pressure will recharge to 90 psi.  
3 Push RCL Emergency Shut Down button on side of locomotive.  
Verify Brake pipe pressure rapidly falls to 0 psi.  
Verify Brake Cylinder pressure rises to 72 - 80 psi (43-48 psi on locos with clasp arrangement composition shoes - J16B relay valve).  
4. To recover from pushed Emergency Shut Down button comanded Emergency:  
Pull out Emergency Shut Down button (if maintained contact type).  
Push the reset button on the RCR (Cattron only).  
Move Independent Brake Override selector to the Emergency position.  
Press Vigilance button on RCT.  
Move Independent Brake Override selector back to the release position.  
PCS will now reset and brake pipe pressure will recharge to 90 psi.

R N



SERVICE TRACK:SV PIT

5. Test RCL Vigilance Timeout Test R N  
 NOTE: BELL WILL RING WHEN PERFORMING THIS TEST.  
 VERIFY THAT ISOLATION SWITCH IS IN ISOLATE.  
 Ensure:  
 RCT Independent Brake Override Selector is in Release position.  
 RCT Automatic Brake Selector is in Release position.  
 RCT Reverser is in Neutral.  
 Step    Action  
 1       Place RCT reverser in either Forward or Reverse.  
 2       Press vigilance button on RCT.  
 3       Place Speed Selector in Coast. Crossing bell will ring.  
 4       Verify that after approximately 50 seconds, vigilance expires, alarm expires, and a full service brake application occurs.
6. Verify Headlight Operation R N  
 Set up headlight switches on locomotive before performing this test.  
 1       Place RCT in Neutral. Verify both headlights are in "dim".  
 2       Place RCT reverser in Forward; then press headlight switch once for "bright". Forward headlight should now be bright. Press headlight switch again for "off." Check for headlight "off." Then press headlight switch again to return to "dim" position.  
 3       Place RCT reverser in Reverse and repeat step 2 above for the reverse headlight.
7. Verify Man-Down Operation R N  
 1) Use a hand-held radio to monitor the locomotive radio transmissions and find an unused voice radio channel. Set the locomotive and hand-held radios to the unused channel for test.  
 2) Refer to LMI 7403 to verify the proper operation of the voice radio. Perform the Touch-Tone test to confirm that the Touch-Tone decoder reads all 12 (0-9, \*, and #) digits sent by the voice radio.  
 3) Place RCT reverser in either Forward or Reverse. Move Speed to stop, verify brakes apply.  
 4) Press vigilance button on RCT. Key the Hand-Held radio and announce:  
 "UPXXXX Man-Down Test, UPXXXX Man-Down Test, UPXXXX Man-Down Test"  
 5) Tilt OCU and wait for Man-Down timeout. Wait for the alarm to fully activate since several warning messages may be broadcast before the 911 tones are sent.  
 6) Confirm that Man-Down Message, including locomotive unit number and "9-1-1" DTMF codes, are broadcast after man-down timeout. Use available Touch-Tone Decoder to verify "911" tones.  
 7) Key the Hand-Held radio and announce:  
 "UPXXXX Man-Down Test Completed, UPXXXX Man-Down Test Completed, UPXXXX out"  
 Continue monitoring the channel to respond to someone answering the man-down transmission.  
 8) Set locomotive voice radio channel back to assigned RCL voice channel.
8. Verify Antenna Operation R N  
 For Each Canac/Cattron or GE RCL Antenna:  
 Use a Bird Model 500 Antenna Tester to verify that the antenna has a SWR reading less than 1.5 at the RCL operating frequency.  
 OR  
 Confirm that the RCL System maintains the OCU to Locomotive Link while driving the RCL Operator/OCU a Distance of 1 mile from the

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SERVICE TRACK:SV PIT

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8. locomotive.
9. Set Up Locomotive for Manual Operation RN
- At the conclusion of the tests, set up the locomotive for manual operation:
- | Step | Action   |
|------|--|
| 1    | Turn RCT off. Locomotive will go to Full Service application   |
| 2    | If equipped, set changeover valve to Manual.   |
| 3    | Place the Changeover Switch to Manual. Locomotive will go to Emergency. Set Locomotive Radio Channel back to normal. |
| 4    | Set up air brake equipment for Lead and recover from Emerg.  |
| 5    | Remove Locomotive in RCL warning tag.  |
| 6    | Apply full Independent brakes and make a 20 psi BP reduction   |
| 7    | Apply handbrake, if required, and secure RCT and reverser per local policy.  |

ADJUST COOLING WATER SYSTEM TREATMENT LEVEL \_\_\_\_\_

Standard Work Task

Calibrate Tester

- 1) Fill the white cell cup and then discard 3 times with calibration fluid.
- 2) Fill white cell cup a 4th time then push the black button. The needle should go to 3000 ppm.
- 3) Adjust calibration potentiometer if the meter does not read 3000 ppm. Access by removing the bottom of meter.

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SERVICE TRACK:SV REPAIR

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APPLY SPARE COUPLER KNUCKLE ALL01

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- Standard Work Task
  - Work Setup
  - 0.2) Inspect Tractor at assigned parking location
  - 1. Prepare Tractor
  - 1.1) Gather lifting device and spare knuckle
  - 1.2.1) Load knuckle onto tractor
  - Unhook the spitzlift hook from it's securement location on the frame
  - 1.2.2) Attach the lifter to the hook
  - 1.2.3) Lower hitch legs and pin in position
  - 1.2.4) Use the spitzlift to load a spare knuckle into the bed of the tractor
  - 1.2.5) Remove the lifter and secure the spitzlift to the frame
  - 1.2.6) Raise the hitch legs and pin in position
  - 2. Apply Spare Knuckle
  - 2.1) Position tractor at a 45 degree angle to the locomotive
  - 2.2) Remove spare knuckle pin from locomotive
  - 2.3.1) Prepare spitzlift for knuckle application
  - unhook the spitzlift from the frame
  - 2.3.2) Apply lifter to spitzlift hook
  - 2.3.3) Lower hitch legs and secure with pin
  - 2.4) Grab knuckle from bed of tractor with lifter
  - 2.5.1) Apply spare knuckle to holder
  - Use spitzlift to set spare knuckle into holder on end frame of locomotive
  - 2.5.2) Keep hands on the handle of the lifter
  - 2.5.3) Keep feet and hands out of line of fire while moving knuckle.
  - 2.6) Insert spare knuckle pin through the holder and spare knuckle
  - 2.7) Secure spitzlift
  - Remove lifter and place in bed of truck
  - 2.8) Raise hitch legs and secure with pin
  - 3. Complete Work
-

SERVICE TRACK:SV REPAIR

APPLY SPARE COUPLER KNUCKLE ALL02

- Standard Work Task  
Work Setup  
0.2) Inspect Tractor at assigned parking location
1. Prepare Tractor
- 1.1) Gather lifting device and spare knuckle
- 1.2.1) Load knuckle onto tractor
- Unhook the spitzlift hook from it's securement location on the frame
- 1.2.2) Attach the lifter to the hook
- 1.2.3) Lower hitch legs and pin in position
- 1.2.4) Use the spitzlift to load a spare knuckle into the bed of the tractor
- 1.2.5) Remove the lifter and secure the spitzlift to the frame
- 1.2.6) Raise the hitch legs and pin in position
2. Apply Spare Knuckle
- 2.1) Position tractor at a 45 degree angle to the locomotive
- 2.2) Remove spare knuckle pin from locomotive
- 2.3.1) Prepare spitzlift for knuckle application
- unhook the spitzlift from the frame
- 2.3.2) Apply lifter to spitzlift hook
- 2.3.3) Lower hitch legs and secure with pin
- 2.4) Grab knuckle from bed of tractor with lifter
- 2.5.1) Apply spare knuckle to holder
- Use spitzlift to set spare knuckle into holder on end frame of locomotive
- 2.5.2) Keep hands on the handle of the lifter
- 2.5.3) Keep feet and hands out of line of fire while moving knuckle.
- 2.6) Insert spare knuckle pin through the holder and spare knuckle
- 2.7) Secure spitzlift
- Remove lifter and place in bed of truck
- 2.8) Raise hitch legs and secure with pin
3. Complete Work

CHANGE AIR DRYER HUMIDITY EYE

STEP 0

ADJUST LUBE OIL, ENGINE

- Standard work task
- Check engine lube oil level
- 1) Ensure engine is idling
- 2) Locate engine lube oil dipstick. GE and EMD have different locations
- 3) Remove engine lube oil dipstick
- 4) Clean engine lube oil dipstick. Use Wypall (UP# 220-5539) or towel
- 5) Insert engine lube oil dipstick. Wait one minute
- 6) Remove engine lube oil dipstick
- 7.1) Read indicated measurement. Look at oil level on dipstick
- 7.2) If oil level is between "Full" and "Add" marks on dipstick, proceed to Step 1.1 for GE Step 2.1 for EMD
- 7.3) If oil level indicates "Full", the task is complete

CHANGE CONTROLLER ASSEMBLY 01

STEP0

REPAIR COVER, TRACTION MOTOR 01

STEP 0

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SERVICE TRACK:SV REPAIR

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REPAIR TRACTION MOTOR LEADS 03

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Standard Work task

NOTE: Best practice to use cleats for cable spacing.

Do NOT bundle so that the leads rub against each other or the car body. Use 715-4128 or 715-6721 for AC TM.

Use 712-0022 for DC TM.

SHOP:SHOP INBOUND

TAKE LUBE OIL SAMPLE(Federal)

WCH

Standard Work Task  
Prepare sample bottles  
0.1) Write RR initials, unit number, date, location, and mark  
"Eng Oil" on bottle labels.

1. Collect samples

WCH

Take a 3 oz. engine lube oil sample  
1.1) Inspect oil sampling tap. Use caution when opening carbony doors.  
1.2) EMD: Inspect Michiana door for tap: 1/4" close nipple (323-3506) and 1/4" male hansen fitting (190-6191). If not present, install  
2.1) Take oil sample. Apply fitting and purge first.  
2.2) Fill bottle 3/4 full (for 4 oz. bottle)

2. Test samples

WCH

1.1) Test oil for water. Hot plate set at 392 degrees F (200 C).  
1.2) Perform crackle test. Pour quarter sized pool of oil on hot plate & listen for crackle. Water in Sample [N]  
2.1) Test oil for fuel. Ensure sniffer is calibrated. If not, use calibration fluid from lab.  
2.2) Ensure bottle is at room temperature and is 3/4 full.  
2.3) Sniffer should seal against bottle top.  
3) Press start button on sniffer to begin test and allow 3 to 5 minutes to test. Fuel dilution [0% \_\_\_\_\_]  
4) Ensure that the sample lids are tight and wipe any fluid or dirt from the sample bottles.  
5) All samples must be shipped within 24 hours of extraction  
6.1) Package samples. Place plastic bag PN 280-0510 and insert divider into sample box  
6.2) Place samples into shipment box, ensuring all sample bottles are upright and neatly packed  
6.3) Mark each package with the following statement: Chemical ID Number "NA 1993".  
7) Ship to:  
Eurofins ANA Laboratories, Inc.  
160 Suite D  
9th Avenue  
Runnemede, NJ 08078

SHOP:SHOP INBOUND

COMPLETE LMI 9414(Federal)

Form 9414 Part A - Universal Locomotive Inspection and Maintenance Record. Union Pacific Railroad Company.

This form is intended for use where inbound and outbound servicing dictates separating the locomotive daily inspection into separate inbound and outbound processes. In these cases all inbound servicing shall be accomplished using 9414 Part A and all outbound servicing shall be accomplished using 9414 Part B in conjunction with the Outbound Departure Test. Both Part A and Part B must be completed to meet FRA requirements. All items shall be inspected for proper security and operation.

1. SAFETY EQUIPMENT

Handrails/Grabirons, Steps, Safety Chains [OK \_\_\_\_\_]  
Platforms and Walkways [OK \_\_\_\_\_]  
Carbody Doors, Hinges, and Latches [OK \_\_\_\_\_]  
Handbrake [OK \_\_\_\_\_]

2. EQUIPMENT OPERATION (MECH)

Fire Extinguisher, Cab & Engine Room [OK \_\_\_\_\_]  
Bell, ring 10 times [OK \_\_\_\_\_]  
Horn [OK \_\_\_\_\_]  
Windshield Wiper [OK \_\_\_\_\_]  
Protective Guards and Covers [OK \_\_\_\_\_]  
Cab Seats and Window Glass [OK \_\_\_\_\_]

3. FLUID AND EXHAUST LEAKS

Water Leaks [OK \_\_\_\_\_]  
Oil Leaks [OK \_\_\_\_\_]  
Fuel Leaks [OK \_\_\_\_\_]  
Charged Air /Exhaust Leaks [OK \_\_\_\_\_]

4. FLUID LEVELS

Engine Lube Oil level [FULL MARK \_\_\_\_\_]  
Governor Oil Level [OK \_\_\_\_\_]  
Air Compressor Oil Level [OK \_\_\_\_\_]  
Cooling System [FULL \_\_\_\_\_]

5. TRUCKS, DRAFT GEAR, UNDERFRAME, AND BRAKES

Truck, Draft Gear, & Underframe condition [OK \_\_\_\_\_]  
Main Reservoir and Blowdown Drains [OK \_\_\_\_\_]  
Air Dryer Humidity Indicator (Eye) Color [SELECT EYE COLOR\_\_]  
Fuel Cap, Gauge, and Vent Valve [OK \_\_\_\_\_]  
Sander Nozzles and Hoses [OK \_\_\_\_\_]  
MU Air Hoses [OK \_\_\_\_\_]  
Trainline Air Hose Height Above Rail  
[OK, >6" ABOVE RAIL \_\_\_\_\_]  
MU Cut-out Cocks and Locks [OK \_\_\_\_\_]

6. BRAKE SHOES AND RIGGING [OK \_\_\_\_\_]

7. TRACTION MOTORS, JOURNAL BOXES, AND WHEELS

Traction Motors, Journals, and Wheels [OK \_\_\_\_\_]

8. CAB SERVICING

Clean Cab, remove trash and debris [OK \_\_\_\_\_]  
First Aid Kit [OK \_\_\_\_\_]  
Graffiti Removed [OK \_\_\_\_\_]

9. SERVICE TOILET [OK \_\_\_\_\_]

10. RETENTION TANK EMPTY [EMPTY \_\_\_\_\_]

11. SAND SERVICING

Sandbox [OK \_\_\_\_\_]

12. FUEL SERVICING

Fuel Quantity as appropriate [FULL \_\_\_\_\_]

13. EQUIPMENT OPERATION (ELEC)

Indicators, Enunciators and DID Panel [OK \_\_\_\_\_]

EKB

EKB

SHOP:SHOP INBOUND

15.	All Interior and Exterior lights [OK_____]	EKB
16.	Speed Indicator/s [OK_____]	EKB
17.	Voice Radio System Intact, TX/RX Clearly [OK_____] (Test radio with Primus "talk back" or Monitor Radio)	EKB
18.	Reverser Handle Interlock [OK_____]	EKB
19.	Air Conditioner Operation -follow reference LMI 9414-A/C [OK_____]	EKB
20.	Air Cond Temp Drop [NOT DONE OUTSIDE LES_____]	EKB
21.	Heater Operation [OK_____]	EKB
22.	Inspect Cab Signals Seals [NOT EQUIPPED_____]	EKB
23.	Cab Signal LCR Cabinet Seal Applied [NOT APPLIED]	EKB
24.	Cab Signal ADU Seal Applied [NOT APPLIED]	EKB
25.	Inspect Cab Signals Receiver Bars [N/A]	EKB
26.	Verify Low Voltage Grounds Clear [OK_____]	EKB
27.	GPS CKT Breaker Closed and Seal Removed [NOT APPLICABLE_____]	EKB
28.	Comm Device Circuit Breaker [N/A_____]	EKB
29.	MU Cables, Covers & Receptacles [OK_____]	EKB
30.	Traction Motor Electrical [TM LEADS OILY_____]	EKB
31.	INSPECTION VERIFIED BY [LOCOMOTIVE SERVICED_]_____	



DEPARTURE:DEPARTURE

COMPLETE CONSIST OUTBOUND DEPARTURE PLANNING

This task should be used by outbound planners once Locomotive position has been identified for use in a consist.

\* ANSWER YES TO EACH OF THE FOLLOWING QUESTIONS IF TRUE.

1. Will this be the Lead Locomotive or Second Leader in the Lead Consist [ ]

- \* Fires COMPLETE AIR BRAKE DEPARTURE TEST - CAB PERSON
- \* Fires COMPLETE AIR BRAKE DEPARTURE TEST - GROUND PERSON
- \* Fires COMPLETE LEAD LOCOMOTIVE CONSIST SET-UP.
- \* Fires CHECK ALERTER
- \* Fires INSPECT DOOR, ENGINE CONTROL CIRCUIT BREAKER
- \* Fires COMPLETE PTC PRE-TRIP TEST
- \* Fires CLEAN CAB INTERIOR

2. Will this be a Lead Controlling or Remote Controlling Unit in a DP Consist [ ]

- \* Fires COMPLETE AIR BRAKE DEPARTURE TEST - CAB PERSON
- \* Fires COMPLETE LEAD LOCOMOTIVE CONSIST SET-UP.
- \* Fires COMPLETE DPU SET-UP, LINK-UP, AND DEPARTURE TEST.

3. Will this be a Lead Unit or "Second Leader" Entering CCS/ATC Territory [ ]

- \* Fires COMPLETE CAB SIGNAL DEPARTURE TEST.
- \* Fires CHECK ALERTER
- \* Fires VERIFY VOICE RADIO & FOT EQUIP SECOND LEADER
- \* Fires CLEAN CAB INTERIOR

4. Will this be a mid train DPU without rear controlling DPU [ ]

- \* Fires APPLY EOT REPEATER

COMPLETE OUTBOUND DEPARTURE TEST(Federal)

Form 9414 Part B consolidated Universal Locomotive Inspection and Maintenance Record Union Pacific Railroad Company. This must be completed in conjunction with LMI 9414 Part A. All items should be inspected for proper security and operation.

1. LOCOMOTIVE CAB INSPECTION

Inspect, Clean & Service Cab - Lead Unit [ ]  
Remove trash all units

2. Verify LMI 9414 Part A has been completed.

3. Verify Blue Card is Present and Current [ ]

4. Locomotive Inspected by: [ ]

5. Cab Card Inspection Date: [ ]

6. Cab Card Inspection Time:[ ]